

Appl. No. 09/611,772
Amdt. Dated May 27, 2004
Reply to Office Action of February 27, 2004

REMARKS

Reconsideration of the application is requested.

Applicant acknowledges the Examiner's confirmation of receipt of applicant's certified copy of the priority document for the German Patent Application 199 31 236.2, filed July 7, 1999 supporting the claim for priority under 35 U.S.C. § 119.

Claims 1-32 are in the application. Claims 1-32 were rejected under 35 U.S.C. § 103(a) in the above-identified Office Action.

In "Claim Rejections - 35 USC § 103" item 1 on page 2 of the above-identified Office Action, claims 1-14, 21-22, and 27-32 have been rejected as being obvious over U.S. Patent No. 6,134,220 to *Le Strat, et al.* (hereinafter **LE STRAT**) under 35 U.S.C. § 103(a).

In "Claim Rejections - 35 USC § 103" item 2 on page 6 of the above-identified Office Action, claims 15-20 have been rejected as being obvious over **LE STRAT** and further in view of U.S. Patent No. 6,473,399 to *Johansson, et al.* (hereinafter **JOHANSSON**) and U.S. Patent No. 6,359,877 to *Rathonyi, et al.* (hereinafter **RATHONYI**) under 35 U.S.C. § 103(a).

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In "Claim Rejections - 35 USC § 103" item 3 on page 7 of the above-identified Office Action, claims 23-26 have been rejected as being obvious over **LE STRAT** and further in view of U.S. Patent No. 6,339,705 to **Pehrson** (hereinafter **PEHRSON**) under 35 U.S.C. § 103(a).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and, therefore, the claims have not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, a method for allocating a transmission capacity to connections in a radio communication system including:

allocating a transmission rate to a connection between a base transceiver station and a subscriber station in dependence on a connection-specific path loss, and

allocating the transmission rate to the connection in dependence on an interference situation at the location of the subscriber station.

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Claim 32 calls for, *inter alia*, a radio communication system including:

A subscriber station having an **interference situation**, and

A base transceiver station having a radio connection to the subscriber station, the radio connection having a **given path loss** and having an **allocated transmission rate based on the given path loss and the interference situation** at the location of the subscriber station.

The **LE STRAT** reference discloses a mobile radio system that enables the exchange of digital signals between a mobile station and a base transceiver station by selecting a coding mode, each coding mode corresponding to a predetermined source code and a predetermined channel code. The coding mode or bit rate for a transmission from a base station to a mobile station are determined in dependence on the transmission quality in each transmission direction between the base station and the mobile station. **LE STRAT** defines transmission quality as consisting of determining one of the following: the bit error rate (BER) of the received signal, the power of the received signal, the distance between the mobile station and the base transceiver station, an estimate of the impulse response of the transmission channel, the time alignment, the signal to noise ration, and the signal to interference ratio (C/I) (Col. 6, lines 34 to 46, see also,

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Col. 10, lines 7 to 15). The transmission quality is then compared "with at least one predetermined threshold" (Col. 6, line 57) where the number of thresholds is equal to the number of coding modes. **LE STRAT** does not allocate a transmission rate based on a connection specific path loss and an interference situation at the location of the subscriber station.

In contrast, the invention of the instant application allocates transmission rate in dependence on "**a connection-specific path loss**" and "**an interference situation at the location of the subscriber station**" as recited in claim 1 of the instant application. Moreover, the disclosed radio communication system provides "**an allocated transmission rate based on the given path loss and the interference situation at the location of the subscriber station**" as recited in claim 32 of the instant application.

A signal quality can never be determined directly by means of a path loss and vice versa, nor is path loss indicative of a particular signal quality result. For example, an excellent signal quality can be present with high as well as low path losses. Only the actually used transmitting power influences the signal quality, whereas the path loss is independent of the used transmitting power. Accordingly, path loss is

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exclusively dependent on the nature of the propagation path over which a signal travels during a transmission. One of skill in the art would never assign a signal quality based merely from path loss data, i.e., one of skill in the art would never assume that a small path loss is an indicator of high signal quality.

Moreover, **LE STRAT** does not provide one of skill in the art with sufficient information to conclude that a path loss would be suitable to determine a signal quality. Rather the applicant respectfully asserts that one of skill in the art would be aware that using a path loss to determine a signal quality according to **LE STRAT** would lead to incorrect results in the selection of a transmission mode or a coding mode.

Furthermore, contrary to the Examiner's opinion on page 3 of the above-identified Office Action, a connection dependent path loss cannot be calculated from the power of a received signal and the distance between the subscriber station and the base station. This calculation would require, for example, additional knowledge regarding the transmission power of the base station. **LE STRAT** does not teach or suggest that the subscriber station is aware of the transmission power of the base station, nor is this

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information necessary to practice the methods described in **LE STRAT**.

With regards to the official notice taken on page 3 of the above-identified Office Action, applicants would respectfully remind the Examiner that official notice without documentary evidence "should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known." MPEP 2144.03 (A). The instant application is situated in a fast moving art that requires the Examiner to consider the art at the time of the invention or at least the priority date of the application on **July 7, 1999**. Moreover, the applicant has demonstrated how the cited **LE STRAT** reference actually teaches away from the invention of the instant application, demonstrating how the subject matter of the official notice is not considered to be common knowledge or well-known in the art.

When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to

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contradiction or explanation by the affidavits of the applicant and other persons.

With regards to claim 1, the Office Action states:

Official notice has been taken that path loss is one of the many well known parameters that have been used to evaluate signal quality and the derivation of connection-specific path loss of the radio communication interface from other signal quality criterions such as the power of the received signal and the distance between the subscriber station and the base transceiver is common in the art; therefore it would have been obvious to one of skill in the art at the time the invention was made to have included path loss, as a parameter of the signal quality taken into consideration along with other parameters as suggested by Le Strat, to allocate transmission rate for the advantage of expanding the application of the system to various parameters to accurately refine the analysis.

In accordance with MPEP 2144.03(C) and 37 CFR 1.104(d)(2), applicants respectfully request an Examiner's affidavit to provide support for the aforementioned official notice taken that such steps were present within the art at the time of the invention or at least the priority date of the application **July 7, 1999** (which is the effective U.S. filing date).

Clearly, **LE STRAT** does not show allocating a transmission rate in dependence on "a connection-specific path loss" and "an interference situation at the location of the subscriber station" as recited in claim 1 of the instant application. Nor does **LE STRAT** teach or suggest a radio communication

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system that provides "an allocated transmission rate based on the given path loss and the interference situation at the location of the subscriber station" as recited in claim 32 of the instant application.

The **JOHANSSON** reference discloses a method and apparatus for determining an optimum timeout under varying data rates.

JOHANSSON does not teach or suggest "a long-term transmission rate allocation" based in part on "the path loss and the transmitter power" as recited in claim 15 of the instant application.

The **RATHONYI** reference discloses a method and system to reduce overhead due to packet re-transmission in a communication system. The packet size may be adapted so that the entire packet fits into a single transmission block.

RATHONYI also indicates that the packet size can be adapted based on the transmission rate, throughput, or retransmission status. **RATHONYI** does not indicate varying the transmission rate using a Transport Format Set procedure, merely the use of an RRC layer to define "procedures for reception and processing of information transmitted over the physical channels" (Col. 3, lines 28-30). Moreover, **RATHONYI** also indicates that "different information rates are obtained using different Transmission Formats," (Col. 5, lines 54-56)

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where the transmission formats are defined by the transmission rate, code, interleaving depth, and repetition and puncturing scheme used.

Clearly, **JOHANSSON** and **RATHONYI** do not show allocating a transmission rate in dependence on "a connection-specific path loss" and "an interference situation at the location of the subscriber station" as recited in claim 1 of the instant application. Nor does **LE STRAT** teach or suggest a radio communication system that provides "an allocated transmission rate based on the given path loss and the interference situation at the location of the subscriber station" as recited in claim 32 of the instant application.

The **PEHRSON** reference discloses a system of using management functions in multiple base stations. More specifically, **PEHRSON** shows a communications network where mobile base station 102 is connected to base stations 104 and/or 105 by a call control interface Uu 103. The base station 104 is connected to a radio network controller 106 or 108 by a traffic control interface Iub 107 or 109, which are connected to each other by an RNC interface Iur 110. **PEHRSON does not** teach or suggest "signaling a transmitter power for a carrier of the base transceiver station" as recited in claims 23, 24, 25 and 26 of the instant application.

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Clearly, PEHRSON does not show "a connection-specific path loss" and "an interference situation at the location of the subscriber station" as recited in claim 1 of the instant application.

Clearly, JOHANSSON, RATHONYI, and PEHRSON do not overcome the previously discussed deficiencies in LE STRAT. It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1 and claim 32. Claim 1 and claim 32 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

In view of the foregoing, reconsideration and allowance of claims 1-32 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

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If an extension of time is required, petition for extension is herewith made. Any extension fee associated therewith should be charged to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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